

REMARKS

Claims 1 through 22 stand rejected. By this paper, Claims 1, 10, and 19 have been amended. Thus, Claims 1 through 22 are presented for reconsideration and further examination in view of the following amendments and remarks.

Claim Rejections under 35 U.S.C. § 103(a) over Tromel in view of Coff et al.

Independent Claims 1, 10, 19, and 21-22 were rejected under 35 U.S.C. § 103(a) as being obvious over Tromel (U.S. Patent No. 3,177,649) in view of Coff et al. (U.S. Patent No. 5,944,322). Applicant has amended Claims 1, 10, and 19.

Tromel is directed to a specific, multi-component arrangement for mounting an exhaust manifold to a v-type engine. This multi-component arrangement includes an adapter 17 having a radial flange 18 and a separate bolting flange 15, all as illustrated in Figure 4. The bolting flange 15, not the radial flange 18, is directly connected to the engine. Notably, adjacent bolting flanges 15 are not connected to each other so as to permit each branch pipe to “rotate about the axis of their straight portions in response to thermal expansion.” Column 2, lines 37-38. Allowing each branch pipe to rotate compensates for longitudinal expansion of the exhaust manifold and is a “principal object of the present invention.” See column 1, lines 28-32.

In contrast, Applicant’s Claims 1 and 10 are directed to an exhaust header having, among other elements, “a web connecting at least two of the plurality of flanges.” Method Claim 19 recites, for example, “the web connecting at least two of the plurality of flanges.” The Tromel reference fails to disclose, inter alia, this structure.

Tromel further teaches away from connecting the flanges. By connecting the flanges in Tromel, the branch pipes would be prevented from rotating about the axis of their straight portions 13a and 14a resulting in excessive stress at the welded joints. See column 2, lines 63-67 and Figure 1. Accordingly, Tromel does not teach or suggest the structure recited by amended Claims 1, 10, and 19. The applied prior art of record does not cure this deficiency in Tromel. Therefore, Applicant respectfully submits that the rejection of independent Claims 1, 10, and 19 as being obvious over Tromel in view of Coff et al. have been overcome.

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Claims 21 and 22

As discussed above, the multi-component arrangement disclosed in Tromel for mounting the exhaust manifold to the v-type engine includes a separate and unique bolting flange 15 which abuts the radial flange 18 of the adapter 17. "The flange 18 is tightened against the gasket 19 sufficient to effect a pressure tight seal but is not held rigid" since the flange 18 only abuts the bolting flange 15 but is not integral to the bolting flange 15. See column 2, lines 35-39. Further, the gasket 19 forms a seal between the cylinder head 16 and the radial flange 18. See column 2, 30-32. Accordingly, the radial flange 18, not the bolting flange 15, includes a seal surface.

In contrast, Claim 21 recites a "flange further comprising bolt holes for directly connecting the flange to the internal combustion engine" with that same flange having "a recessed seal surface configured so as to support therein a gasket in a manner such that at least a portion of the gasket is open to the passageway." Claim 22 recites, for example, "each flange having bolt holes for directly connecting the flanges to the multi-cylinder engine" with the same flange having "a recessed sealing surface." The Tromel reference fails to disclose, inter alia, this structure.

Tromel further teaches away from the recited limitations. Tromel discloses only one sealing arrangement for the branch pipes to the cylinder heads and explains that this one arrangement is of "considerable importance." See column 2, line 34. The sealing arrangement in Tromel teaches to not rigidly hold the radial flange 18 and sealing surface relative to the engine. This flexible arrangement is at least in part achieved by locating the sealing surface on the radial flange 18 separate from the bolting flange 15. Accordingly, Tromel does not teach or suggest the structure recited by Claims 21 and 22. The applied prior art of record does not cure this deficiency in Tromel. Therefore, Applicant respectfully submits that the rejection of independent Claims 21 and 22 as being obvious over Tromel in view of Coff et al. have been overcome.

Dependent Claims 2-9, 11-18, and 20 depend directly or indirectly from one of Claims 1, 10, and 19, thus, are patentable for at least the same reasons that support the allowance of the claim from which they depend. Therefore, allowance of Claims 1-22 is respectfully requested.

CONCLUSION

For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

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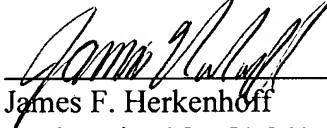
Any remarks in support of patentability of one claim should not be imputed to any other claim, even if similar terminology is used. Any remarks referring to only a portion of a claim should not be understood to base patentability on solely that portion; rather, patentability must rest on each claim taken as a whole. Applicants have not presented arguments concerning whether the applied references can be properly combined in view of the clearly missing elements noted above, and Applicants reserve the right to later contest whether a proper motivation and suggestion exists to combine these references.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicants' attorney in order to resolve such issue promptly.

Respectfully submitted,

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